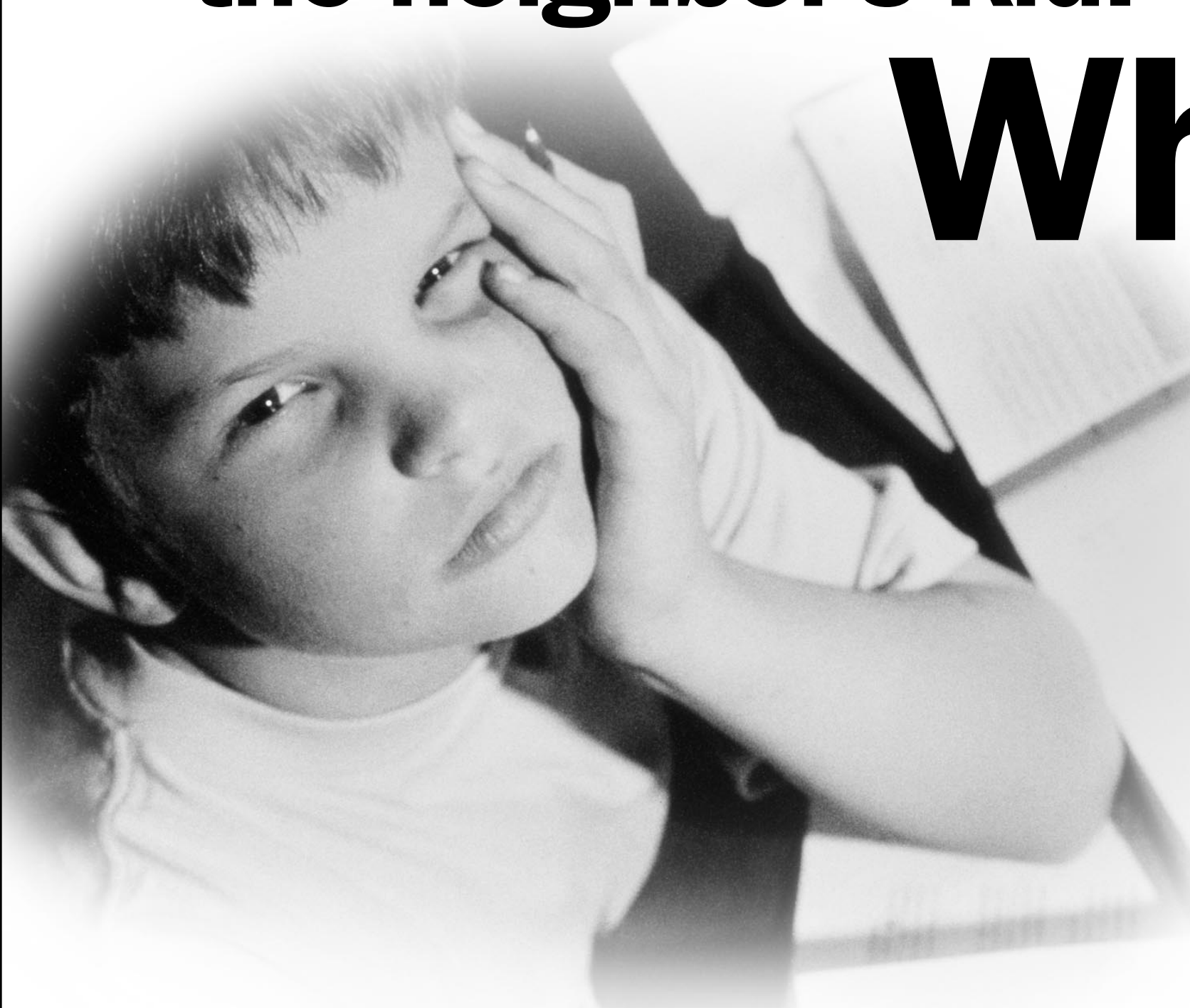
#1 IN A SERIES

Johnny can't read, sit still, or stop hitting the neighbor's kid.

Why?



Toxic chemicals can cause learning disabilities.

We are physicians and scientists. We are deeply troubled that an estimated twelve million American kids suffer from developmental, learning, or behavioral disabilities. Attention deficit disorder affects three to six percent of our schoolchildren.

These disabilities are caused by a complex interplay of genetic, environmental, and social factors. Evidence reviewed by the National Academy of Sciences indicates that toxic chemicals contribute to these problems. Environmental factors take on great importance because they can be prevented.

What We Know

Studies show that lead, mercury, industrial chemicals, and certain pesticides cross the placenta and enter the brain of the developing fetus where they can cause learning and behavioral disabilities. This is true in young animals – and in young children.

Exposures to organophosphate pesticides during pregnancy can result in abnormally low brain weight and developmental impairment in offspring. A Duke University study conducted on rodents found that hyper-activity and brain cell death can be caused by small exposures to the widely used organophosphate pesticide Dursban. That study led to the ban on the production and sale of Dursban. But similar-acting pesticides are still on the market.

A University of Arizona study found that children exposed to a combination of pesticides before birth and through breast milk exhibited less stamina, and poorer memory and coordination, than other kids.

Mercury released by coal-fired power plants contaminates waterways and accumulates in fish. Many thousands of the pregnant women in America who eat fish consume enough mercury to potentially harm their children's neurological development. Some states warn that children should not eat more than a can of tuna per week; based on EPA guidelines, a twenty-pound child may exceed a level considered safe for the most sensitive populations with just 1.3 ounces.

Though PCBs have been banned, residual PCBs still do much damage. Children whose mothers ate Great Lakes fish contaminated with PCBs showed lowered IQs and shortened attention spans. And these effects on intelligence and behavior have been shown to persist throughout childhood. A Dutch study confirmed that increased maternal levels of PCBs can impair cognition in infants. Young monkeys exposed to PCBs at low levels show learning disabilities and hyperactivity.

What We Can Do

There is much that parents can do to protect their children, beginning with the elimination of many pesticides both outside and in the home. And the choice of a wise diet. There are more suggestions on our website, www.childenvironment.org.

But we must do more. We have enough scientific evidence to phase out those chemicals known to harm children's behavior and development. If a medicine caused these problems in kids, we'd ban it.

We don't allow food or drugs to be sold before being shown to be safe. Yet there are thousands of chemicals on the market that affect human biology and have never been tested. Most importantly, we must demand that new chemicals be tested for safety before being allowed on the market. We do not have a system that does that now.

A summary of the supporting scientific evidence, and a list of scientific endorsers, can be found at www.childenvironment.org.

Center for Children's Health and the Environment

MOUNT SINAI SCHOOL OF MEDICINE

Box 1043, One Gustave Levy Place, New York, NY 10029 • **www.childenvironment.org**